

STATE OF MICHIGAN  
DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

**ORDER OF THE SUPERVISOR OF WELLS**

IN THE MATTER OF:

THE PETITION OF OMIMEX ENERGY, INC FOR AN ORDER	)	
FROM THE SUPERVISOR OF WELLS APPROVING A	)	
PRESSURE MAINTENANCE OPERATION FOR RECOVERY OF	)	
OIL, GAS, AND RELATED HYDROCARBONS, AND	)	ORDER NO. 05-2019
ABROGATING EXISTING SPACING AND PRORATION ORDERS	)	
AND RULES IN THE HAMLIN TOWNSHIP, MASON COUNTY,	)	
MICHIGAN.	)	

**OPINION AND ORDER**

This case involves the Petition of Omimex Energy, Inc (Petitioner), requesting (i) formation of the 320-acre Hamlin 25 Unit (Unit Area); (ii) approval of a secondary recovery operation in the Hamlin 25 Pool pursuant to Section 61506(i), Part 615, Supervisor of Wells, of the NREPA and R 324.612 of the rules promulgated pursuant to Part 615; (iii) abrogation of Order No, 3-1-73: and (iv) approval to operate the proposed Unit Area as an exception to the proration allowables of Special Order No. 1-73. The proposed Unit Area consists of approximately 320 acres, and is described as:

Section 25: W/2 of NE/4, NW/4, and N/2 of SW/4  
Township 19 North, Range 18 West,  
Hamlin Township, Mason County, Michigan.

**JURISDICTION**

The development of oil and gas in this state is regulated under Part 615, Supervisor of Wells, MCL 324.61501, *et seq.* The purpose of Part 615 is to ensure the orderly development and production of the oil and gas resources of this state, with a view to the ultimate recovery of the maximum production of these natural resources. MCL 324.61502. To the end of maximizing recovery, the Supervisor of Wells (Supervisor) regulates secondary recovery methods for oil and gas, including the introduction of substances into producing formations for purposes of enhancing production. MCL 324.61506(i). A person proposing secondary recovery by injection of

a fluid into a producing formation must file a petition for a public evidentiary hearing. 1996 MR 9, R 324.612. The evidentiary hearing is governed by the applicable provisions of the Administrative Procedures Act, 1969 PA 306, as amended, MCL 24.201, *et seq.* See 1996 MR 9, R 324.1203. The evidentiary hearing in this matter was held on June 18, 2019.

### **FINDINGS OF FACT**

The Petitioner specifically requests that the Supervisor issue an Order forming a 320-acre Unit Area; and allow the Petitioner to inject natural gas and other approved substances into the Salina-Niagaran Formation, the productive zone, for purposes of secondary recovery and/or pressure maintenance; and exempt the proposed Unit Area from the applicable spacing and proration rules and orders.

In support of its case, the Petitioner offered the testimony of A. Kenneth Prior, III, Operations Manager, Omimex Energy, Inc.

The Supervisor determined the Notice of Hearing was properly served and published. No answers in opposition to the Petition were filed. The Supervisor designated the hearing to be an evidentiary hearing pursuant to R 324.1205(1)(b) and directed evidence be presented in the form of verified statement.

#### **I. Unit Area**

Mr. Prior testified three Hamlin 25 Pool wells were drilled on 80-acre drilling units. The Stolberg, Hagan, Hanson 1-25 (PN 28989) was subject to Order 3-1-73. The Stolberg, Hagen, Hanson 2-25 (PN 29639) and Stolberg, Hagen, Hanson 3-25 (PN 30007) were subject to Special Order 1-73. These three original drilling units and the N 1/2 NW 1/4 of Section 25, T19N, R18W, Hamlin Township (Tract 4) make up the proposed Unit Area. The lands in the three original 80-acre drilling units and Tract 4 were voluntarily pooled by the Voluntary Pooling Agreement effective May 1, 2003 (Exhibit C). Mr. Prior testified Petitioner became operator of the three wells effective

November 1, 1992, and all three wells remain on primary production subject to the provisions of Special Order No. 1-73 and Order 3-1-73.

Mr. Prior testified all owners of oil, gas, and minerals in the proposed Unit Area, are known and are subject to a valid and fully effective oil and gas leases (Exhibit B). Petitioner has recorded its May 1, 2003 Pooling Declaration to establish the 320-acre Unit Area (Exhibit C). Unit production will commence after the effective date of this Order, when natural gas injection commences. Mr. Prior testified Petitioner owns or controls 100 percent of all working interest in all oil and gas leases in the Unitized Formation in the Unit Area and is qualified to be unit operator.

Based on available drilling records, well logs, seismic maps, well completion histories and actual well production, Mr. Prior testified the Hamlin 25 Pool consists of one reef and the reef is entirely contained within the proposed Unit Area. (Exhibits D and E) In addition, Mr. Prior testified there are no producing wells within 0.25 miles of the Unit Area. (Exhibit F)

Mr. Prior testified that Petitioner plans to conduct unitized operations within the Unitized Formation described as all formations between the top of the A-1 Carbonate Formation and the top of the Gray Niagaran Formation or the stratigraphic equivalent encountered in the Stolberg, Hagen, Hanson 2-25 well (PN 29639) shown in Exhibit D.

I find the Unitized Formation as proposed by the Petitioner is reasonable and appropriate and should be approved. I find the Petitioner's characterization of the outline and contours of the reservoir to be reasonable. Review of the evidence submitted indicates portions of the reservoir underlie each tract within the proposed Unit Area. Therefore, I find the boundaries of the proposed Unit Area as proposed by the Petitioner are appropriate.

## II. Secondary Recovery

Mr. Prior testified that three wells drilled into the Hamlin 25 Field have been completed and produced, the Stolberg, Hagen, Hanson 1-25, 2-25 and 3-25. Mr. Prior indicated the field production history shows the field is near the end of its primary producing life. All the wells have been shut in since March 2017 as the cost of



transportation and processing of the natural gas produced outweighs the value of the primary production given the limited amount of oil produced by primary production.

Mr. Prior testified total primary recovery from the three wells has been 2.510 million barrels of oil (Exhibit I). The producing wells in the field were, prior to being shut in, producing at marginal rates and without the implementation of enhanced oil recovery technology, the field is very near the end of its primary producing life.

The Petitioner believes significantly more oil will be recovered as a result of natural gas injection to increase bottom hole pressure. Petitioner initially proposes to inject natural gas into the field utilizing the Stolberg, Hagen, and Hansen 2-25 well. In order to avoid fracturing the reservoir and to minimize the risk for migration beyond the sealed boundaries of the reef, the surface injection pressure shall not exceed the pressure permitted by the United States Environmental Protection Agency (US EPA), which is 1567 pounds per square inch gauge (psig) pursuant to the injection well permit issued by US EPA to Petitioner. (Exhibit J)

Mr. Prior referred to the Hamlin 25 Pool as a closed system, which he explained is a reservoir where fluid is trapped and does not go beyond the boundaries of the reservoir. This was evidenced by a decline in pressure in the reservoir as oil and gas were removed by the producing wells during primary production. It is Mr. Prior's opinion based on his experience with gas injection in carbonate reservoirs, that the natural gas injected into the Hamlin 25 Pool will not migrate outside the reservoir. Mr. Prior further testified Petitioner intends to follow all rules and regulations regarding injection and enhanced recovery operations set forth by the US EPA and the Department of Environment, Great Lakes, and Energy (EGLE). In his opinion, compliance with all rules and regulations assures injection can be done safely and without harm to any adjoining or nearby lands or formations.

Injection of natural gas will negate the uneconomic situation which exists with regard to the transportation and processing of the gas and avoid having to flare the gas.

By having an outlet for the gas through the injection process, Petitioner will be able to install casing compressors in the Stolberg, Hagen, and Hansen 1-25 and 3-25 wells which will also enhance oil production.

Mr. Prior testified oil production will be handled at the existing Hamlin 25 central production facility (CPF). Natural gas for the project will come from Petitioner's production wells in the proposed unit along with natural gas transported by pipeline from natural gas handling facilities operated by Petitioner in the vicinity.

Mr. Prior testified that having studied the production performance of other Enhanced Oil Recovery (EOR) projects has enabled him to obtain a reasonable prediction of future performance for the Hamlin 25 Field. He estimates that natural gas injection in the Hamlin 25 Field would result in incremental oil recovery of approximately 44.3 thousand barrels of oil over depletion of the reservoir by primary production (Exhibit I).

Mr. Prior testified there will be no physical changes or additions to surface equipment or facilities due to the injection project and the footprint of the existing central production facility will remain the same.

After review of all testimony and evidence on the record, I find the type of operations contemplated by Petitioner are feasible, will prevent underground waste by recovering oil not otherwise recoverable, and will protect correlative rights. I find abrogation of Special Order No. 1-73 well spacing, well location, and proration requirements is necessary to proceed with EOR operations, except no well shall be completed in the Unitized Formation at a location closer than 330 feet from the outside boundary of the proposed Unit Area. I further find the testimony and evidence show the reservoir is contained within Petitioner's proposed 320-acre Unit Area, the Petitioner's proposed EOR project will be confined to the proposed Unit Area, and that the abrogation of Order 3-1-73 is necessary to proceed with EOR operations.

### **CONCLUSIONS OF LAW**

Based on the findings of fact, I conclude, as a matter of law:

1. The applicable spacing, well location, and proration requirements for the proposed Unit Area are established by Special Order No. 1-73 and Order 3-1-73.
2. The Supervisor may regulate the secondary recovery methods of oil and gas, including pulling or creating a vacuum and the introduction of gas, air, water, and other substances into the producing formations. MCL 324.61506(i).
3. A person desiring to inject water, gas, or other fluids into a producing formation or use other technology for the purpose of increasing the ultimate recovery of hydrocarbons from a reservoir shall file a petition for hearing. 1996 MR 9, R 324.612(1).
4. The operator of a secondary recovery project shall keep accurate records of all oil, gas, and brine produced, volumes of fluids injected, and injection pressures. The operator shall file reports of the data and other data as may be required with the Supervisor at regular intervals, as specified. 1996 MR 9, R 324.612(2).
5. The Supervisor has jurisdiction over the subject matter and the persons interested therein.
6. Due notice of the time, place, and purpose of the hearing was given as required by law, and all interested persons were afforded an opportunity to be heard. 1996 MR 9, R 324.1204.

### **DETERMINATION AND ORDER**

Based on the Findings of Fact and Conclusions of Law, the Supervisor determines the proposed secondary/enhanced oil recovery project will prevent waste and maximize the recovery of hydrocarbons from the proposed Unit Area.

NOW, THEREFORE, IT IS ORDERED:

1. The Petition of Omimex Energy, Inc. is granted, and the proposed Unit Area is created in accordance with, and subject to, this Order. The proposed Unit Area shall hereafter be known as the Hamlin 25 Unit.

2. Omimex Energy, Inc. is appointed Unit Operator.

3. The Hamlin 25 Unit is described as:

Section 25: W/2 of NE/4, NW/4, and N/2 of SW/4  
Township 19 North, Range 18 West,  
Hamlin Township, Mason County, Michigan.

4. The Unitized Formation is described as:

The stratigraphic equivalent of all formations between the top of the A-1 Carbonate Formation and the top of the Gray Niagaran Formation or the stratigraphic equivalent encountered in the Stolberg, Hagen, Hanson 2-25 (PN 29639), located in the W 1/4 of NE 1/4 of SW 1/4 of Section 25, T19N, R18W, Hamlin Township, Mason County, Michigan.

5. Omimex Energy, Inc. shall notify the Supervisor between 30 and 60 days prior to the commencement of injection operations, and between 30 and 60 days prior to the anticipated date of permanent cessation of injection operations. Petitioner shall comply with the filing requirements of R 324.610, R 324.612, and R 324.810 of the administrative rules of Part 615 of the NREPA and shall obtain such approvals as are necessary from EGLE.

6. Operation of the Hamlin 25 Unit shall be conducted exclusive of and as an exception to all applicable spacing orders and rules, except no well may be completed in the Unitized Formation at a location closer than 330 feet from the outside boundaries of the Hamlin 25 Unit Area. Omimex Energy, Inc. is authorized to produce wells on the Unit Area at rates that result in the maximum efficient recovery of hydrocarbons. All other parts of Special Order No. 1-73 and the administrative rules of Part 615 of the NREPA shall be adhered to. Order 3-1-73 is abrogated in its entirety.

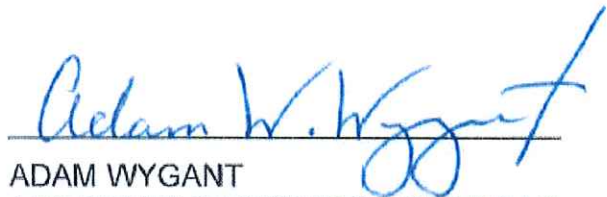
7. The unitized operations shall initially be accomplished by the injection of natural gas. Other substances may only be injected with written approval from the Supervisor.

8. The Supervisor retains continuing jurisdiction over the Hamlin 25 Unit in order that the Supervisor may exercise such administrative control as is consistent with the powers and duties of the Supervisor, as established by Part 615 of the NREPA.

9. This Order shall be effective immediately.

DATED: \_\_\_\_\_

July 18, 2019



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